clinical trials in which rosiglitazone was used in combination with insulin.[9] Combination therapy of rosiglitazone with insulin is therefore contraindicated (although pioglitazone is approved for use in combination with insulin treatment in the United States).

Reassuringly, extensive use of rosiglitazone and pioglitazone has produced little evidence that it has caused hepatic impairment. However, caution dictates that these drugs are contraindicated in patients with hepatic impairment or if pretreatment concentrations of alanine aminotransferase are raised more than 2.5 times the upper limit of normal.[9] Cardiac failure of any degree (past or present) is a contraindication, and patients with reduced cardiac reserve should be monitored closely.[9] There is also a risk of pregnancy in anovulatory women with insulin resistance. Pioglitazone induces cytochrome P450 isoform CYP3A4, raising the possibility of drug interactions, such as with oral contraceptives.

The United Kingdom prospective diabetes study shows that better glycaemic control reduces the risk of microvascular complications.[10] In addition, the trial exposes the need for additional drugs that are effective against diabetes.[11] The thiazolidinediones have had a faltering start. An appraisal by the National Institute for Clinical Excellence (NICE) in the United Kingdom is planned. However, over a million patients have now been given these drugs, and the continuing paucity of publications in peer reviewed journals is a concern.[12] The rising global incidence of type 2 diabetes[13] suggests that these drugs could have an important impact on diabetes care.

Andrew J Krentz *consultant in diabetes and endocrinology*

Southampton General Hospital, Southampton SO16 6YD (a.j.krentz@soton.ac.uk)

Clifford J Bailey *head of diabetes research*

Department of Pharmaceutical Sciences, University of Aston, Birmingham B4 7ET (c.j.bailey@aston.ac.uk)

Arne Melander *head of NEPI Foundation*

Medical Research Centre, Malmö University Hospital SE-205 02, Sweden (arne.melander@nepi.net)

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# Training overseas doctors in the United Kingdom

*They must be given accurate information about their job prospects*

*Personal view* p 307

The United Kingdom has a long tradition of training overseas doctors—that is, doctors who gained their primary qualification outside the European Economic Area. In this week's *BMJ*, Sridhar argues that the United Kingdom should radically revise its practices in relation to overseas doctors seeking training posts (p 307).[1] Similar issues were raised in 1994.[2]

Doctors have travelled to other countries for training for many years. Doctors who travel overseas for postgraduate training represent only one feature of "medical migration," which can be temporary or permanent and is a phenomenon that occurs worldwide for a variety of reasons. This migration is influenced by a number of factors, including a lack of training facilities and opportunities in the doctor's home country, high unemployment among health professionals in the home country, the shortage of doctors in some developed countries where there may be many posts that are hard to fill, and the availability of training placements in developed countries.[3] "Medical migrants" make up a considerable proportion of the medical workforce in many developed countries, accounting for 30% of NHS staff. The number of overseas doctors in the training grades has been increasing over the past 10 years; in England, 29% (4257) of senior house officers and 27% (3208) of specialist registrars are from overseas.[2 4] The number of medical graduates from the European Economic Area who did not qualify in the United Kingdom but are being trained in the NHS is increasing slowly and accounts for 9% (1335) of senior house officers and 7% (795) of specialist registrars.[4] The NHS is providing training to and benefiting from the services provided by a substantial number of overseas doctors.

The finite number of training posts for senior house officers and specialist registrars are filled by open competition, although a small number of doctors from overseas are placed directly into posts through the sponsorship of the Overseas Doctors Training Scheme, which is run by the medical royal colleges. Direct placement causes particular concern since it reduces the number of posts that are available through open competition. The NHS Executive has recently established a panel to make recommendations on this

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issue. It will take into account the service contribution provided by the doctors within structured training programmes, guidance from the Department of Health on the recruitment of doctors, equal opportunities legislation and policy, the arrangements for registration with the General Medical Council, and current immigration regulations. Options to be considered by the panel include a wholesale revision of the Overseas Doctors Training Scheme and the criteria for direct placement and possibly limiting direct placement to certain specific training placements or stopping it completely.

There is anecdotal evidence that a number of overseas doctors successfully complete the examination of the professional and linguistic assessment board but find it difficult to get training grade posts afterwards. In some cases doctors have waited for more than a year despite applying for many jobs. The supply of training placements for overseas doctors has been outstripped by the demand. Training opportunities in the NHS can meet the needs of overseas doctors, which include basic and higher specialist training and preparation for examinations. Improvements in managing and delivering training are needed to maximise the training opportunities; these improvements could include offering an induction course about the NHS and specific training placements and assessing the doctor's training needs and agreeing objectives. Immigration regulations allow overseas doctors to stay in the United Kingdom to complete postgraduate training to the standard of the Certificate of Completion of Satisfactory Training. This certificate is granted by the Specialist Training Authority of the Medical Royal Colleges and confirms that the doctor has completed specialist training.

While we await the recommendations of the review panel, overseas doctors who are considering travelling to the United Kingdom for training must be given appropriate information from British embassies and consulates, from the British Council, and from the GMC. The information must clearly state that success in the professional and linguistic assessment board examination does not guarantee employment in the NHS, and that there is competition for placements in training grades. Overseas doctors should be warned, as those who train in the United Kingdom should also be, that in certain specialties gaining a training post at a higher specialist level is intensely competitive.

Christopher Welsh *regional postgraduate dean*

NHS Executive Trent, Sheffield S10 3TH
(chris.welsh@doh.gsi.gov.uk)

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# Molecular stool screening for colorectal cancer

*Using DNA markers may be beneficial, but large scale evaluation is needed*

Colorectal cancer is the most common fatal malignancy among non-smokers in North America and Europe. Better tools are needed to improve the accuracy, compliance rates, safety, and affordability of screening. Stool testing has several important advantages over structural screening methods and warrants more investigation. Stool testing is non-invasive, avoids unpleasant cathartic preparation, can be performed on transported specimens without people having to visit their physicians, and, unlike sigmoidoscopy, reflects the state of the full length of the colorectum. Screening for stool markers that are more accurate than occult blood could substantially improve screening outcomes, and there is a strong biological rationale for targeting the DNA alterations that are exfoliated from neoplasms.

Faecal occult blood testing, used to screen for colorectal cancer for nearly three decades, continues to be the most widely used tool. Although controlled trials have shown that is of significant benefit, deaths from colorectal cancer have only been reduced by 15-33% after 10-14 years, and it has had no real impact on reducing the cumulative incidence of cancer.[1–3] These outcomes are consistent with a tool that misses many early stage cancers and most premalignant adenomas.

Because neoplasms that could be caught by screening often do not bleed and occult bleeding from trivial sites is common, faecal occult blood is an inherently insensitive and non-specific marker. When compared with endoscopy, faecal occult blood tests detect $<30\%$ of cancers and $<12\%$ of large adenomas.[4] The specificity of the faecal occult blood test averages about 95% (range 88-98%); this translates into an average false positive rate of 5%, the equivalent of an unnecessary colonoscopy on 1 in every 20 people screened.[4] Non-specificity increases the costs of screening programmes and morbidity from diagnostic interventions. These limitations of faecal occult blood tests are biologically inescapable and cannot be remedied by technological advances in measuring faecal occult blood.

DNA is an intriguing alternative marker in the stool for reasons that are, theoretically, compelling. Firstly, DNA is released into the faecal stream continuously via exfoliation rather than intermittently via bleeding, which could enhance sensitivity and obviate the need for multiple stool tests during each screening. Secondly, DNA comes from the neoplasm itself rather than from the circulation, which could improve specificity. Thirdly, colonocyte exfoliation from cancers is quantitatively much greater than from normal mucosa.[5 6] Fourthly, the well characterised genetic alterations in colorectal neoplasms serve as potential targets for assays.[7] Fifthly, DNA seems to be stable during faecal transit and storage. Sixthly, proscriptions on diet and medications would probably be unnecessary with this test. Finally, sensitive laboratory techniques allow minute amounts of

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